

Fran Kelava

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github.com/fkelava

Experience

Software Developer, AVL-AST d.o.o, Croatia June 2021 – Sep 2025

- Developed an Android mobile application used to test driver aids and autonomous systems in vehicles. A (co-)driver can use the app to combine their observations with camera and sensor measurements.
- Integrated direct vehicle data bus communication into the application. Post-processing time was halved by enabling the on-board data logger to fuse application data with sensor output.
- Implemented dynamic app layout reconfiguration based on OTA retrieval of JSON configuration from server.
- Created a modular vehicle telemetry system, used to stream Formula Student race car data with no downsampling and minimum end-to-end latency even in poor network conditions.
- Wrote scripts for automated UI testing of graphical applications in Python.

Systems Administrator, FSB Racing Team, University of Zagreb Nov 2019 – Oct 2023

- Administered a 100-user hybrid Active Directory/Azure AD setup, managing machine fleets with Group Policy and Intune, allowing single sign-on to all services.
- Managed a MS 365 tenant, allowing 12 divisions of the team to communicate and share files on one platform.
- Created a reliable single-box virtualization, networking, and storage stack using Proxmox, OPNsense and ZFS.
- Combined C#, Python, and PowerShell to automate datasheet retrieval from numerous platforms, workstation provisioning, and configuration.

Education

University of Zagreb, BS in Mechanical Engineering (transferred) Sept 2018 – Sept 2024

- Rector's Prize in 2021/22 for work on the FSB-RT06R "VulpesR" electric Formula Student race car.
- **Orientation:** Autonomous Systems & Computer Intelligence, with a focus on automotive applications.

University of Slavonski Brod, BS in Mechanical Engineering Graduation: late 2025

Publications, Conferences

Applications of ZFS in small businesses May 2022

DORS/CLUC 2022

Regarding the applications of ZFS to handle the storage requirements of the FSB Racing Team at minimal cost.

Projects

Binary Reverse-Engineering github.com/peppy-enterprises/fahrenheit

- Reverse-engineered parts of a video game and created a framework to reliably inject C# code into native processes. Leverages C# P/Invokes to the fullest for low-level native interoperability.
- Tools Used: C++, C#, Ghidra

Skills & Technologies

Programming languages: C#, C++, Python

Applications: Visual Studio, Git (& GitLab/GitHub), Ghidra, MS Office.

Platforms and systems: Android, Docker, Windows Server, Active Directory, Hyper-V, Proxmox, ZFS, MS Azure, AWS, PowerShell, OPNsense, Group Policy, Intune, Yocto Project, Grafana, InfluxDB, MQTT, CANopen.

Languages: Croatian (native), English (C1/C2), German (B1).